Introduction and Background

West Valley Water District (District) and the City of Rialto (Rialto) provide water for residential and commercial/industrial uses in Rialto, California. The District and Rialto obtain water from several different sources, including groundwater wells, surface water sources, and the State Water Project; however, groundwater accounts for more than two-thirds of these supplies (Egan 2006; ERSC 2006).

The District is mainly located in the southwestern portion of San Bernardino County, and to a lesser amount within northern Riverside County. The District is situated within the San Bernardino Valley and is within the Santa Ana River (SAR) Watershed. The majority of the District's service area is located in the north-central part of the Rialto-Colton Groundwater Basin (Basin). Groundwater has been a primary water source in the region for decades, and the Basin has provided a substantial portion of the overall groundwater supply.

In recent years, perchlorate has been detected in several of the District's and Rialto's production wells at concentrations exceeding the action level and maximum contaminant level (MCL) of 6 micrograms per liter (µg/L) established by the California Department of Public Health Services (CDPH) in 2007. More specifically, groundwater samples collected from the District Well No. 11 and Rialto Well No. 6 indicate that perchlorate, a chemical causing acute health effects, exceeds more than three times the 6 µg/L MCL.

Untreated groundwater with elevated levels of perchlorate, nitrate, and volatile organic compounds (VOCs) is considered an extremely impaired source by CDPH. For this reason, the District and Rialto have removed adversely impacted production wells from service, pending the installation of appropriate treatment measures. The loss of these wells has made it challenging for the District and Rialto to maintain operational flexibility and to meet seasonal peak water demands.

The Sentinel Well Project (Project) is part of a greater project called the "Groundwater Wellhead Treatment System Project (GWTSP)" in which a newly constructed groundwater contamination wellhead treatment project (WTP) will use a multiple treatment-train Fluidized Bed Bioreactor (FBR) system to treat for perchlorate and nitrate coming from the two contaminated drinking water production wells located in the Basin. The result will be removal of perchlorate, nitrate, and trichloroethylene (TCE) from the contaminated groundwater coming from two Public Water System (PWS) drinking water production wells: Rialto Well No. 6 and District Well No. 11 located in the Basin.

A sentinel well is needed for Rialto Well 6 because no existing well is located or perforated to adequately meet the 97-005 surveillance criteria. Rialto Wells 3, 4, and 5 already serve as sentinel wells for District Well No. 11. The Project has been developed to meet the requirements set forth in the CDPH Policy Memo 97-005 Policy Guidance for Direct Domestic Use of Extremely Impaired Sources (CDPH 97-005 Policy).

The District and Rialto have established a cooperative agreement (Att5_LGA12_WestValleyWD_WrkPln_2of4.pdf) to restore the two contaminated production wells to service (Rialto Well No. 6 and District Well No. 11). Under this agreement, the District has taken the lead for the planned construction and operation of a groundwater wellhead treatment system that will remove perchlorate and nitrate from groundwater and reduce VOCs concentrations in groundwater. Groundwater pumped from Rialto Well No. 6 (located off Etiwanda Avenue in Rialto) and District Well No. 11 (located off Willow Avenue in Rialto) will be

conveyed approximately 6,300 linear feet via existing and newly constructed underground pipelines to a treatment facility currently under construction at the District's headquarters, located at 855 West Base Line Road, Rialto, California. The successful completion and operation of the treatment system will result in approximately 2,000 gallons per minute (gpm) of treated groundwater restored to the District's drinking water supply for distribution.

Goals and Objectives

The Project has the following goals and objectives:

- Install a sentinel well as one required component to put contaminated drinking wells back into service.
- Provide water quality data and feedback about the current groundwater basin status before and after the two contaminated drinking wells are put back into service.
- Provide input for groundwater modeling that can determine adequacy of remedial actions.
- Stabilize groundwater supplies in the Rialto-Colton Basin and reclaim operational flexibility.

Purpose and Need

The Project has been developed to meet the requirements set forth in the CDPH 97-005 Policy. Completion of the Project will enable Rialto Well No. 6 to be put back into service once the 97-005 permit is finalized.

The loss of two drinking wells due to groundwater contamination has made it difficult for the District and Rialto to maintain operational flexibility and meet seasonal peak water demands. Because of rising perchlorate concentrations, Rialto declared a water supply emergency and has joined with the District in an effort to stabilize local water supplies. Large portions of groundwater in the Rialto-Colton Groundwater Basin are currently contaminated with perchlorate, nitrate, and VOCs, including TCE.

The Rialto-Colton Basin is part of the Upper Santa Ana River (SAR) Watershed, located in San Bernardino County. The *Upper Santa Ana River Watershed Integrated Regional Water Management Plan* (IRWMP) identified the "Remediation Extraction Wells to Capture High-Concentration Perchlorate Contamination in Rialto-Colton Basin" as a project to meet the IRWMP's goals and objectives by meeting the water supply benefits and providing water quality benefits as described below.

The Project will allow monitoring of the water quality conditions in the contaminated groundwater basin. As a result of this Project, the District and Rialto will be able to restore water supply lost due to water quality impairment and decrease reliance on imported water. The amount of water supply to be restored is 4,302 AF/yr, or over 30 years (projected life of treatment project), approximately 129,060 AF.

The water supply benefits include: 1) restoring groundwater supplies from two wells that have been idled due to perchlorate, nitrate and VOC contamination; 2) by restoring these wells, there will be less of a need for imported water; and 3) the use of local-groundwater supplies instead of imported water, provides a lower-energy usage, lower-cost and more reliable water supply; and

4) through interconnections with the District, this restored water supply can be delivered to other water retailers in the area.

The Project provides water quality benefits primarily in that it is a required component for the larger WTP Project to treat contaminated groundwater. As such, the Sentinel Well Project will provide water quality benefits related to:

1) The numerical mass of salt/contaminants removed. Approximately 3,300 tons of perchlorate/nitrate destroyed, and a total salts load of 12,000 tons removed from groundwater.

2) The benefit derived from remediating and abating a severe, and still migrating plume of contamination. This benefit will also result in minimizing the total duration and cost required for cleanup, and help decrease the adverse impacts to groundwater wells downgradient of the project, and also in other groundwater Basins.

3) The benefit derived from the full-scale CDPH-permitted, implementation of a viable sustainable green-remediation technology for destroying perchlorate and nitrate contaminants from drinking water in the form of the FBR technology.

Project Description

The proposed Sentinel Well will serve as a groundwater monitoring well situated between Rialto Well No. 6 (sensitive downgradient receptor) and the 160-acre area (inferred upgradient source of groundwater contaminant plume). Chemical impacts first detected in the Sentinel Well will serve as a warning that impaired groundwater may be moving closer to Rialto Well No. 6. The Sentinel Well will be located far enough upgradient of Rialto Well No. 6 (within the 10-year capture zone) to allow enough time to initiate mitigative measures to prevent contamination from reaching the water supply well.

A capture zone refers to the three-dimensional region that contributes the groundwater extracted by one or more water wells, and a capture zone analysis is the process of interpreting the extents of the actual capture zone. A capture zone analysis was conducted on behalf of the District to estimate the source-water areas of District Well No. 11 and Rialto Well No. 6 for time horizons of 2, 5, 10, 15, 20, and 30 years, using an approach consistent with the general guidelines for capture zone evaluation described in USEPA (2008). Based on this analysis, it was determined that a sentinel well was needed for Rialto Well 6 because no existing well is located or perforated to adequately meet the 97-005 surveillance criteria. Rialto Wells 3, 4, and 5 already serve as sentinel wells for District Well No. 11.

The District proposes the installation of the Sentinel Well in the vicinity of the West Base Line Road and Lilac Avenue intersection for surveillance monitoring purposes of Rialto Well No. 6. The Sentinel Well is proposed to be installed on the Rialto United Methodist Church property located at 1230 N. Lilac Avenue. This location is approximately 3,000 feet northwest of Rialto Well No. 6 and lies within the 10-year capture zone (Figure 1). By placing the Sentinel Well within the 10-year capture zone, the District has ample time to initiate mitigative measures to prevent any possible contamination water from reaching Rialto Well No. 6.

Project Scope of Work

This Section defines the required tasks for the specific activities that will be performed to implement the Sentinel Well Project. The task descriptions will be used as the scope of work in the grant agreement if the Proposal is selected for funding. The task detail allows the reviewer to fully understand the work to be performed in order to evaluate the adequacy of the Proposal. Additionally, the tasks provide sufficient detail to justify the project cost estimates. Tasks listed in this Work Plan are consistent with those used in **Attachment 6, Budget, and Attachment 7, Schedule**.

The tasks below pertain to completing the construction Contract Documents for the bidding of the Sentinel Well to be used for monitoring by the District groundwater conjunctive use fields. The proposed Well will be bid using a single package and the work completed by a single well drilling contractor. The documentation of the prior investigative phase work to be used as the Basis of Design and for preparing the well drilling physical criteria. Final well design will occur following the completion of the well drilling, geophysical logging and formation sample analysis once actual subsurface conditions are understood. The tasks described below include preparation of Contract Documents, Bidding Assistance and Construction Phase Services.

(a): Direct Project Administration Costs

a.1: Administration

Project administration includes administration of grant and construction contracts, preparation of reports and plans, coordination of design contracts, and other activities as required completing design and construction that may not be directly related to those tasks.

Deliverables: None.

a.2: Labor Compliance Program

Public Resources Code section 75075 requires that any entity awarding a contract for a public works project financed in any part with funds made available by Proposition 84 must adopt and enforce a Labor Compliance Plan. The District will contract with a labor compliance consultant to prepare the Labor Compliance Plan in accordance with the California Department of Water Resources (DWR) requirements.

Deliverables: Submission of Labor Compliance Program.

a.3: Reporting

The District will prepare and submit quarterly progress reports and invoices to DWR. The District will require the contractor to submit monthly progress reports to accompany each invoice. The progress reports will describe activities undertaken and accomplishments of each task during the milestones achieved, and any problems encountered in the performance of the work under this contract.

A final well completion report will be prepared and submitted to DWR within 60 days of the well completion. The report will include the information required in the provisions of Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code (those provisions

will be documented on the well driller's log that is submitted to the state in addition to the final well installation report described here). The well installation report will document the monitoring well design, construction, and testing process. The report will be signed and sealed by a California professional geologist.

Deliverables: Quarterly Progress Reports, and Final Summary Report at Completion.

(b): Land Purchase/Easement

The District is not purchasing land for implementation of the project. The District is requesting an easement from the Rialto United Methodist Church, the owner of property for the proposed site of the Sentinel Well, located at 1230 N. Lilac Avenue. The Well is proposed to be installed in the lot that is vacant and adjacent to the west of the Church building but still within Church property.

The "Easement Agreement" and fees are still being negotiated between the District and the Rialto United Methodist Church and will be included in the annual Operations & Maintenance (O&M) for the Project. Attached as Att5_LGA12_WestValleyWD_WrkPln_3of4.pdf is a letter of intention from the Rialto United Methodist Church indicating they are interested in pursuing negotiations with the District.

(c): Planning/Design/Engineering/Environmental Documentation

c.4: Water Quality Parameters Monitoring Frequency in Months for Sentinel Well

The Sentinel Well will be routinely monitored for general minerals, inorganics, nitrate, nitrite, radiological parameters, VOCs, and semi-VOCs (SVOCs) following the monthly schedule presented in the table below:

Table 1
Parameter Monitoring Frequency in Months for Proposed Sentinel Well

	Parameter*						
Source Name	**General Mineral / General Physical**	**Inorganic**	**Nitrate**	**Nitrite**	**Radiological**	**VOCs**	**SVOCs**
Sentinel Well	18	18 Asbestos 999	12	18	18	18	18

*Water quality parameters are defined per CDPH, San Bernardino District letter dated 28 January, 2011 to West Valley Water District regarding "Source Water Quality Monitoring Frequency for Compliance Cycle Beginning January 1, 2011.
999 = Not required testing.

c.5: Basis of Design Memorandum

A Basis of Design Memorandum (BDM) that will be prepared that includes the following:

1. Project description, funding source, vicinity map, and well location map.

2. Background summary of prior investigative work resulting in the project recommendations.

3. Constructability Considerations – Water source for drilling, work area access and layout, pump test discharge approach, noise and work hour limitations, cutting disposal requirements, and site restoration requirements.

4. Conceptual well design criteria to including the following:

    i) Well site plan
        (1) Document allowable work area, water source and any special considerations at each site.
    ii) Well conductor casing diameter, casing diameter, and materials
    iii) Well screen materials
    iv) Well depth
    v) Target pumping rate
    vi) Anticipated groundwater table operating ranges and projected drawdown under design pumping conditions
    vii) Proposed well screen placement and completion
    viii) Well Profile

5. Permitting Requirements – State and local jurisdiction permitting requirements will be documented and recommendations for who should be responsible to obtain each permit provided.

6. Conceptual Well Equipping Plan - Conceptual layout of the proposed equipping plan to confirm the well location can accommodate the final equipping plan. The equipping plan will include a vertical turbine pump, piping, electrical, well enclosure (sun and blowing debris) and site fencing.

7. Special Construction- considerations for pump to waste, well inspection and access and District preferences for layout and site use will be documented under special construction.

8. Well Drilling Cost Estimate using Draft Bid Schedule

The BDM will be prepared to succinctly document the assumptions, prior findings, and recommendations to be incorporated into the Well Drilling Contract Documents for bidding.

Deliverables:

- One (1) electronic copy and one (1) hard copy of draft BDM
- One (1) electronic copy and three (3) hard copies of final BDM

c.6: Well Contract Documents

In this task, the preparation of the Well Drilling Contract Documents consisting of a well profile, site plan, and specifications for the project (50%, 90%, and Bid Set completion) are completed. The site plan will include a well design figure and conceptual site layout of the proposed

equipping plan to confirm the well location can accommodate the final equipping plan based on the BDM.

The Well Drilling Contract Documents will include the following:

- Sample Bid Advertisement (Standard Document)
- Instruction to Bidders (Standard Document)
- Bid Forms (Standard Document)

- General Conditions (Standard Document)
- Special Provisions (CSI Format)
- Technical Specifications (CSI Format)

A design review meeting will be scheduled to review the 50% design documents and present the design to the District. The submittal will include the Bid Schedule for discussion on District preferences for bidding unit costs for items likely to change quantity following drilling of the pilot hole. The District will provide survey and base mapping for use in design and preparation of Contract Documents.

Deliverables:

- One (1) electronic and one (1) hard copy of 50% Contract Documents
- One (1) electronic and three (3) hard copy of 90% Contract Documents
- Three (3) hard copies and one (1) electronic copy (PDF and AutoCAD drawings) of Bid ready Contract Documents

c.7: Preparation of CEQA Exemption

California Environmental Quality Act (CEQA) was completed with a Notice of Determination Filing Date of September 8, 2009. The District adopted a Mitigated Negative Declaration and a Mitigation Monitoring Program pursuant to the provisions of CEQA. Environmental documentation is included as Att5_LGA12_West ValleyWD_WrkPln_4of4.pdf.

It is anticipated that installation and operation of the Sentinel Well will result in only minor alterations in the condition of land and vegetation and will not involve the removal of healthy, mature, or scenic trees. The Sentinel Well will therefore qualify for a Class 4 Categorical Exemption under CEQA (CEQA Guidelines Section 15301). The District will prepare a Notice of Exemption for the Sentinel Well Project (consistent with CEQA Guidelines Section 15062) providing the project description, the project location, and justification for the finding that the project is exempt from CEQA. The District will file the Notice of Exemption with the San Bernardino County Clerk and the State Office of Planning and Research.

Deliverables: Notice of Exemption.

c.8: Permitting

After bidding of the construction for the contract is complete, the following required permits will be obtained:

- County of San Bernardino Well Permit

(d): Construction/Implementation

d.9: Construction Contracting

The bidding assistance includes the following:

1. Present a short list of local well drillers
2. Conduct Pre-Bid Meeting with potential bidders
3. Facilitate bidding period by answering questions from potential bidders, maintain a list of plan holders, reproduction of bidding documents, preparation and distribution of up to two (2) addenda before bid opening
4. Attend public bid opening at District office
5. Analyze bid results and prepare a recommendation for award

Deliverables: Advertisement for bids; pre-bid contractors meeting; evaluation of bids; award contract

d.10: Construction

The proposed Sentinel Well's depth and screen length will be similar to that of the upper screened portion of the Rialto Well No. 6. However, actual well construction will be based on the conditions encountered in the field at the time of drilling. The Sentinel Well will consist of a single screened interval from about 475 to 850 feet below ground surface (depth bgs), which is approximately the same elevation as the upper screen in Rialto Well No. 6. The total depth of the Sentinel Well will be about 880 feet bgs. Costs associated with the construction of the Sentinel Well take into account that a field geologist will be onsite at all times during drilling activities to log the soil cuttings and that a field technician will be onsite at all times to obtain water quality field parameters during well development work. In addition, construction costs also account for a field technician supervising well installation and wellhead completion efforts.

After the Notice to Proceed has been issued by the District to the selected Contractor, the following subtasks will happen:

d.10.1: Pre-Construction Subtasks

Field preparation tasks will include subcontracting, obtaining permits, and a visit to the Site to mark sampling locations and screen the locations for buried utilities. The following pre-construction subtasks will be completed:

1. Coordinate and conduct a pre-construction meeting with the selected drilling contractor and District staff.
2. Procure necessary permits for the proposed Sentinel Well from the County of San Bernardino.
3. Prepare contractor work agreements and obtain necessary insurance certificates.

4. In accordance with the federal Occupational Safety and Health Act (OSHA), prepare Site-specific Health and Safety Plan prior to implementing the proposed work. The Plan will comply with OSHA standards for potentially hazardous field investigations (29 CFR 1910.120) and CalOSHA standards (8 CCR 5192). This plan will establish general health and safety protocols to be used by field personnel during well construction activities to reduce the possibility of injury and exposure to potentially hazardous materials.

5. To reduce the risk of encountering buried utilities, personnel will use both Underground Services Alert (USA) and a geophysical utility survey at the proposed Sentinel Well location. The geophysical survey will include geophysical techniques such as magnetic and electromagnetic surveys, and/or ground penetrating radar, and marking locations with appropriate all weather paint on the ground surface above where utilities have been identified using the standard indicator colors. The proposed Well location may need to be adjusted in the field to avoid buried utilities or structures.

d.10.2: Pilot Borehole Drilling

Initial construction of the Sentinel Well will entail daily field management, equipment mobilization and set-up, pilot borehole drilling and logging, downhole geophysical logging, equipment decontamination, field quality assurance/quality control measures, and waste containment/management. Further explanation of drilling activities is provided below:

1. In-house field management will be performed to resolve questions and conflicts that may arise during well construction activities. This includes daily correspondence with the project team (field staff, Contractor, and/or District staff), reviewing change orders, managing investigative-derived wastes (IDW), etc.

2. Upon mobilization to the site, drilling equipment will be staged in such a manner protective of the general public and land occupants. The work area will be delineated using traffic cones, signage, and caution tape to help prevent entry of the general public into the work area. At the end of each work day, the work area will be neatly organized and all field equipment will be property secured. Following the completion of the proposed work, the work area will be cleaned and all field equipment will be removed from the site.

3. Daily observation during drilling. This will include pilot borehole formation logging and daily observation of well construction activities. For health and safety purposes, the Consultant's field staff will periodically monitor the breathing zone of the drill crew and monitor soil cuttings as they are extracted using an organic vapor analyzer (OVA). The total depth of the pilot borehole will be about 1,000 feet bgs, but this depth is subject to change should site conditions prove different than what is expected.

4. Following drilling activities, geophysical testing will be performed in the pilot borehole to evaluate the geologic and hydrogeologic characteristics of the stratigraphic column.

5. All down-hole drilling equipment will be decontaminated prior to the onset and following the completion of drilling activities.

6. As a quality assurance/quality control (QA/QC) measure, field equipment rinsate samples will be collected to provide a check on decontamination effectiveness. One

equipment rinsate sample will be collected for each day of drilling. Deionized water will be used to rinse the drilling equipment after the equipment has been cleaned and then collected in a sample container. The rinsate sample will be labeled "RS-" followed by the date collected (e.g., RS-122503). The rinsate sample will be recorded on the chain-of-custody form, placed in a cooler, transported to the laboratory with the other samples and analyzed for VOCs only.

7. Investigation-derived residuals (IDRs), including soil cuttings and decontamination water will be stored onsite in Department of Transportation (DOT)-approved containers. IDR containers will be stored at a central location designated by the District and land owner. Once the waste has been profiled, proper disposal of the material using a qualified waste disposal contractor will be coordinated. For the purpose of this work plan, it has been assumed that IDRs will classify as non hazardous materials.

d.10.3: Well Installation

The proposed Sentinel Well's depth and screen length will be similar to that of the upper screened portion of the Rialto Well No. 6. However, actual well construction will be based on the conditions encountered in the field at the time of drilling. The Sentinel Well will consist of a single screened interval from about 475 to 850 feet depth bgs, which is approximately the same elevation as the upper screen in Rialto Well No. 6. The total depth of the Sentinel Well will be about 880 feet bgs. The Proposed Well is anticipated to be drilled using the direct rotary method, appropriate for both the geologic materials expected to be encountered and the size of the borehole. Borehole geophysical logs will be prepared. The borehole for the well will be approximately 12¼ -inch in diameter and 6-inch diameter steel casing and screen (thick-walled mild steel or stainless steel) will be used to construct the well. The screen will be separated from the native formation using a filter pack of clean sand; the grain size of which will be determined based on the formation encountered during drilling.

d.10.4: Well Development and Surveying

Well development will be performed on the Sentinel Well to promote hydraulic connection with the aquifer following its installation (minimum 72 hours following placement of the annular well seal). Development activities will entail surging, bailing and pumping the saturated portion of the screened interval of the well until purged water appears free of visible sediment and has stabilized physical parameters, such as pH, temperature, specific conductivity and turbidity.

Prior to development, depth to groundwater and total well depth measurements will be recorded on well development forms to determine the length of the screen submerged in groundwater. A surge block will be set inside the well and maneuvered up and down the saturated portion of the screened interval in three-foot increments, starting at the upper-most portion of the screen and working downward. Each increment will be surged for a set time to minimize bridging in the filter pack material and to loosen fine particulates lodged in the filter pack. Once the well has been surged, a bailer will be lowered into the well and used to remove sediment inside the well screen. Bailing activities will continue until most of the sediment has been removed from the well. A submersible pump will then be set inside the well and operated to induce groundwater flow towards and the rapid migration of particulates toward the well.

Water quality parameters, such as pH, specific conductivity, temperature and turbidity will be collected at set intervals. Development activities will cease once these parameters have reached stabilization, as defined by three consecutive measurements that are within 10 percent

of each other, and sediments appear to have been adequately removed from the well screen and filter pack.

All down-hole drilling equipment will be decontaminated prior to the onset and following the completion of drilling activities. IDRs, including purge water and decontamination water, will be stored onsite in DOT-approved containers and handled in the same manner as wastes generated during drilling activities. For the purpose of this work plan, it has been assumed that IDRs generated from well development activities will classify as non hazardous materials.

The Sentinel Well will be surveyed by a California licensed land surveyor. The survey will consist of determining the latitude and longitude of the well to sub-meter accuracy and obtaining its top of casing and ground surface elevation to the nearest 0.01 foot.

d.10.5: Wellhead Completion & Improvements

Following development activities in the previous subtask, the Sentinel Well will be equipped with a vertical turbine pump and motor, motor control center, site electrical, discharge piping, valves, a shade structure for the electrical panels, and security fencing.

d.10.6: Documentation

Field activities performed under the Construction Task will be documented with the following items:

Daily Field Notes	The primary form for documenting field activities. The notes will include a chronology of events at the site; special conditions and problems encountered; arrival and departure of workers, visitors; and any deviations from the Work Plan.
Boring Logs	Documents soil characteristics and drilling conditions at the pilot borehole.
Well Development Record	Documents well depth, water level information, and water quality parameters observed during well development activities
Tailgate Safety Meeting Form	Documents attendance of each day's morning meeting in which the general scope of work and safety considerations are discussed.
IDR Inventory	Documents the quantity and contents of IDR containers.

d.10.7: Well Completion Report

This subtask includes the preparation of a comprehensive report which is completed following the construction phase services. The report will detail the Construction Task (d.10) and summarize the various datasets (i.e. soil stratigraphy, downhole geophysical information, water quality parameters, etc). The report will include relevant maps and copies of the soil boring log. The Well Completion Report will be provided to the District in a three-ring binder with original prints and a disk with the report in electronic format.

Deliverables:

- Three (3) hard copies Well Completion Report and one electronic copy of the report.

(e): Environmental Compliance /Mitigation/ Enhancement

See Task c.7: Preparation of CEQA Exemption.

(f): Construction Administration

During construction, District staff and/or qualified engineering consultants will provide construction management and administration, including daily on-site observation; inspection of material and fabrication processes at the factory; testing of materials used for construction, including soils; and documentation of these activities. The District will require the contractor to submit monthly progress reports to accompany each invoice. The District will compile the major items in the monthly progress reports into Quarterly reports to accompany invoices to the State.

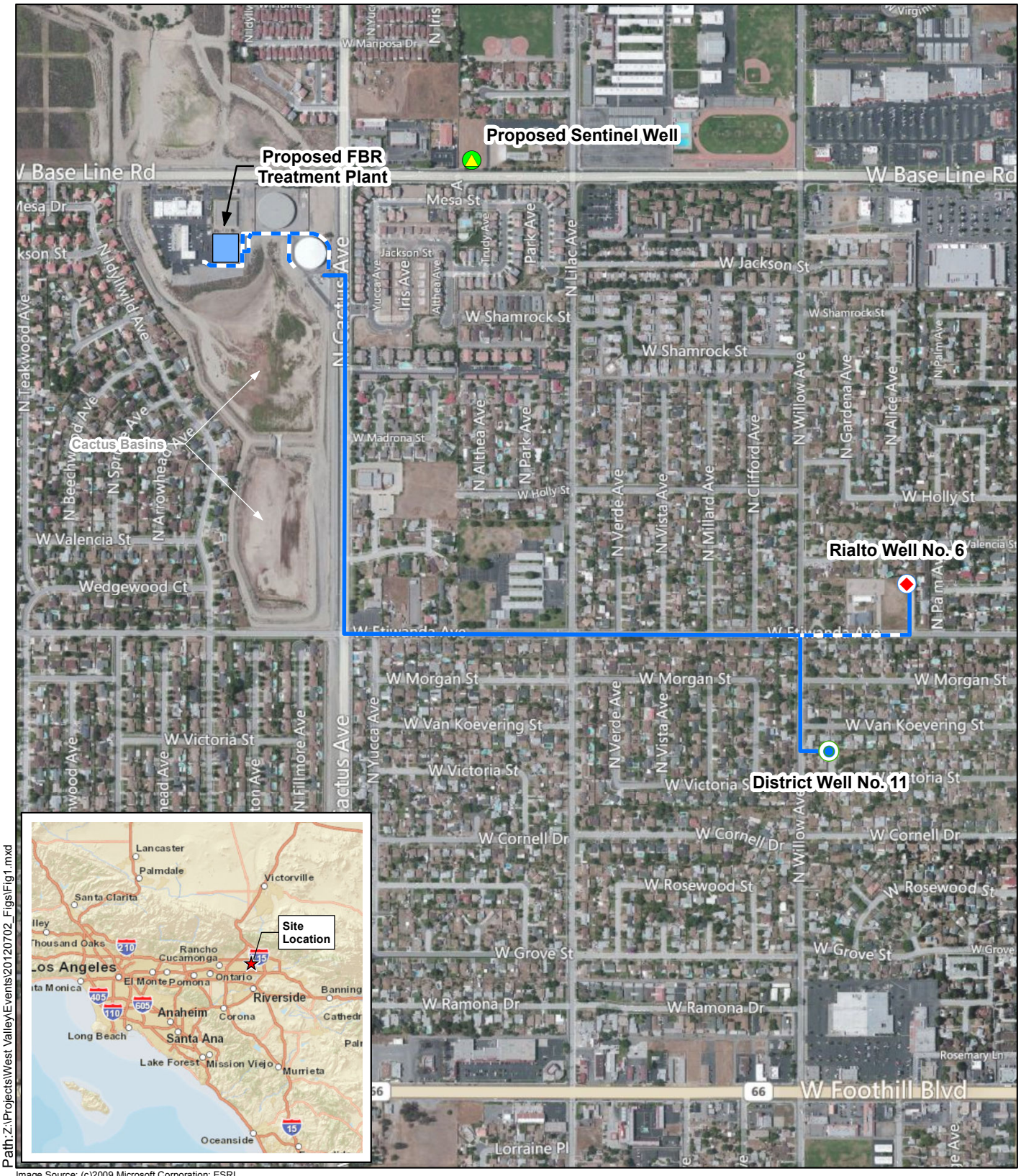

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Image Source: (c)2009 Microsoft Corporation; ESRI
Note: Figure Adapted from LSA, 2009
All locations and boundaries are approximate.

Legend

- Rialto Well #6
- WVWD Well #11
- Proposed Sentinel Well
- Existing Pipeline
- Proposed Pipeline
- Proposed FBR Treatment Plant

N

0 400 800

Scale: Feet

Kennedy/Jenks Consultants

West Valley Water District
Rialto, California

Regional and Well Location

Figure 1

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